

Office Action Summary

Application No.

09/677,288

Applicant(s)

FRANK, ANDREW A.

Examiner

Julio C. Gonzalez

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8/13/01.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

2. Claims 1-11, 21 and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Ibaraki et al.

Ibaraki et al discloses an apparatus for controlling the power at the output of an internal combustion engine, comprising an electric motor 14 coupled to the engine and a motor controller 28. Also the motor 14 comprises a motor/generator 34 and the motor controller varies positive and negative output torque (column 24, lines 1-5) and the motor 14 is coupled to a transmission 16 and the transmission is controllable comprising means for controlling the rate of change of ratio (column 24, lines 53-55). Moreover the transmission is automatic and variable (column 25, line 20) and the motor 14 is between engine 12 and transmission 16. Also, the control apparatus 28 has an electric motor 14 driving a transmission 16 and a battery system 36 powering the electric motor 14 comprising an electric motor controller 28 connected to electric motor 14. Moreover, Ibaraki et al discloses an engine controller 42-48 connected to combustion engine.

3. Claims 12-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Yamaguchi.

Yamaguchi discloses a generator 3 coupled to the output of engine 2 and a generator controller 12. Also Yamaguchi discloses that the generator comprises a generator/motor (see figure 1) and that the controller varies positive and negative output torque in accordance to predetermined characteristics (column 17, lines 23-25).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 12, 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ibaraki et al in view of Yamaguchi.

Ibaraki et al discloses an apparatus for controlling the power at the output of an internal combustion engine, comprising an electric motor 14 coupled to the engine and a motor controller 28. Also the motor 14 comprises a motor/generator 34 and the motor controller varies positive and negative output torque (column 24, lines 1-5) and the motor 14 is coupled to a transmission 16 and the transmission is controllable comprising means for controlling the rate of change of ratio (column 24, lines 53-55). Moreover the transmission is automatic and variable (column 25, line 20) and the motor 14 is between engine 12 and transmission 16.

Also, the control apparatus 28 has an electric motor 14 driving a transmission 16 and a battery system 36 powering the electric motor 14 comprising an electric motor controller 28 connected to electric motor 14. Moreover, Ibaraki et al discloses an engine controller 42-48 connected to combustion engine and a motor/generator coupled to drive shaft

However Ibaraki does not disclose a generator and a generator controller which can function as part of the transmission.

On the other hand, Yamaguchi discloses a generator 3 and a generator controller 12 for the purpose of generating and controlling electricity, which the generator and generator controller are part of the transmission system (see figure 1).

It would have been obvious to one having ordinary skill in the art to make a system using an electric motor with a transmission coupled to a combustion engine and a controller as disclosed by Ibaraki et al and to use a generator and a generator controller for the purpose to generate and control electricity as disclosed by Yamaguchi.

6. Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi et al in view of Kawakatsu et al.

Yamaguchi discloses a shaft 25 coupled to the transmission and a generator/motor 3 coupled to engine 2, and a generator/motor controller 12 connected to generator 3 and a battery 4 connected to generator/motor controller 12. Also, Yamaguchi discloses a motor controller 12 connected to the motor 3.

However Yamaguchi does not disclose a motor/generator coupled to a shaft and wheels involve in the transmission system.

On the other hand Kawakatsu et al discloses a drive shaft 9 coupled to motor/generator 3 (column 4, lines 63-67) and a battery 49 connected to the motor/generator 3 for the purpose to supply voltage to a the car's computer. Moreover, the motor/generator and motor/generator controller are part of the transmission system (see figure 3). Also, the transmission has an output driving a first wheel 17 at a first end of vehicle wheel and an electric motor 3 driving a second wheel 21 at a second end of vehicle. Also, the control means is used for varying the torque output (column 22, lines 18-22).

It would have been obvious to one having ordinary skill in the art to couple a shaft to the transmission system and couple a generator/motor to the engine as disclosed by Yamaguchi and to use a first wheel and a second wheel, a motor/generator and a motor/generator controller and a battery for the purpose to supply voltage to the car's computer as disclosed by Kawakatsu et al.

Response to Arguments

7. Applicant's arguments filed 8/13/01 have been fully considered but they are not persuasive. From figure 1 of Ibaraki's invention, the figure shows an electric motor coupled to an engine and a motor controller and a motor coupled to the transmission. Eventually, the motor and the motor controller would vary the engine power depending on the need of the vehicle. For example, the motor is controlled by the accelerator pedal, which depending on the need of the vehicle, the speed might be increased or decreased therefore these changes do also control the engine and the engine power

output as disclosed. Also, the power of the engine or the power of the electric motor are simultaneously or selectively transmitted (Patent # 6,098,733 *Ibaraki et al* column 11, lines 9-12) thus the power of the electric motor varies the engine power output.

Moreover, in respect to the motor controller "which varies engine power output", it should be emphasized that "apparatus claims must be structurally distinguishable from the prior art." MPEP 2114. In *re Danly*, 263 F. 2d 844, 847, 120 USPQ 528, 531 (CCPA 1959) it was held that apparatus claims must be distinguished from prior art in terms of structure rather than function. In *Hewlett-Packard Co v Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990), the court held that: "Apparatus claims cover what a device is, not what it does." (emphases in original). To emphasize the point further, the court added: "An invention need not operate differently than the prior art to be patentable, but need only be different" (emphases in original).

That is, in an apparatus claim, if a prior art structure discloses all of the structural elements in the claim, as well as their relative juxtaposition, then it reads on the claim, regardless of whether or not the function for which the prior art structure was intended is the same as that of the claimed invention.

8. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., allowing the motor/generator to let the engine operate at wide open throttle and the formula/description mentioned in page 18 of the remarks) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from

the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

9. In response to applicant's argument (claims 19, 20) that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Both references are very related since the references deal with electric vehicles' structures and ways to improve the efficiency of the inventions.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Application/Control Number: 09/677,288
Art Unit: 2834

Page 8

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julio C. Gonzalez whose telephone number is (703) 305-1563. The examiner can normally be reached on M-F (8AM-5PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-1341 for regular communications and (703) 305-1341 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Jcg

October 31, 2001


KARL TAMA
PRIMARY EXAMINER
PRIMARY EXAMINER